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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,002	11/25/2003	Regine Haller	TFR0188	7687

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Valeo Climate Control Corp  
Intellectual Property Department  
4100 North Atlantic Boulevard  
Auburn Hills, MI 48326

EXAMINER

DUONG, THO V

ART UNIT PAPER NUMBER

3753

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/722,002	Applicant(s) HALLER ET AL.	
	Examiner Tho v. Duong	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2006.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 14, 18-20, 22-24, 26 and 27 is/are pending in the application.  
4a) Of the above claim(s) 3, 4, 8, 9 and 20 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 14 is/are allowed.
- 6) ☒ Claim(s) 1-2, 6-7, 10-11, 18-19, 22-24 and 26-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Receipt of applicant's amendment filed 5/17/06 is acknowledged. Claims 1-11,14,18-20,22-24 and 26-27 are pending. Claims 3-4,8-9 and 20 remain withdrawn from further consideration.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-2,5-7,10,11,14,18-19,22-24 and 26-27 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed subject matter that the heat storage comprises one of paraffins, hydrated salts and eutectic compounds in combination with water, is not supported by the original disclosure. It appears in the original disclosure that the water is used for cold storage material and paraffins, hydrated salts are used for hot storage material.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-2,6,7,10,11,18,19,22-24 and 26-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed subject matter of "a heat transfer fluid containing heat exchanger for a fluid circuit through which a heat transfer fluid run" renders the scope of the claim indefinite since it is not clear whether applicant is claiming the heat transfer fluid or the heat exchanger. Furthermore, it is not clear how a heat transfer fluid can contains a heat exchanger.

Claims 18, 19 and 27 recite the limitation "the heating radiator heating fluid" in lines 1-2. There is insufficient antecedent basis for this limitation in the claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2,15,16,18,19 and 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Bureau et al. (US 6,691,527) in view of Jensen (US 4,696,338). Bureau discloses (figures 5-6 and 8-10) a heat exchanger comprising at least one manifold delimiting an inlet and an outlet for a heat transfer fluid; a plurality of parallel flat tubes (620) having two opposed large faces and in which circulation ducts (605,621,650), and cavities (622,601,651) are formed; a multiplicity of corrugated fins forming a heat exchange surfaces, each of which is arranged between two adjacent tubes; the cavity contains a heat storage medium; the cavity situated

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adjacent to the circulation ducts in which a way that the heat storage fluid is able to exchange heat with air flow that sweeps the heat exchange surface (fins) if the circulation of the heat transfer fluid through the ducts is stopped. Bureau further discloses (column 8, lines 49-58) that at least one connecting pipe communicates with the cavities. Bureau does not disclose that the heat exchanger is intended to be used as a heating radiator and the storage fluid has a melting point of between 60 and 90 degrees. It has been held that a recitation (heat exchanger is a heating radiator) with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitation. *Ex parte Masham* 2 USPQ 2d 1647 (1987).

Regarding to the material of the heat storage fluid “Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.” *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, “Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims.” *In re Young*, 75 F.2d 996, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). In this instant case, the same claimed heat exchanger can be employed to work as an evaporator if the heat storage fluid is water and as a heating radiator if the heat storage fluid is paraffin, hydrated salts or eutectic compounds. Therefore, the inclusion of material such as water (0-10 degrees melting point) or paraffin, hydrated salts (60-90 degrees melting point) worked upon by the heat exchanger does not impart patentability to the claims. Moreover, heat storage materials with the melting point of between 60 and 90 degrees, which are used in a heating radiator, are known in the art. Attention is now directed to Jensen, Jensen teaches (column 3, line 40 – column 4, line

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15) phase change material in the range of -20 degrees to about 95 degrees are suitable for heat or cooling storage. One of the phase change materials is hydrated salt  $Mg(NO_3)_2 \cdot 6H_2O$ , which has a melting point of 90 degrees, maybe employed in the heat exchanger for heat storage application. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Jensen's teaching in Bureau's heat exchanger for heat storage application.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bureau et al and Jensen and further in view of Tanabe (US 5,314,013). Bureau and Jensen substantially disclose all of applicant's claimed invention as discussed above except for the limitation that the heat exchanger comprises of a plurality of U-shaped flat tubes. Tanabe discloses (figures 2,4,8 and column 4, lines 37-43) that the heat exchanger can not only be a parallel straight tube type heat exchanger as well known as disclosed in the prior art of Bureau but also be U-shaped tube type heat exchanger. Tanabe discloses that the heat exchanger comprises of a plurality U-shaped flat tubes (11) having a plurality of fins disposed between the tubes so that the efficiency of the heat exchange performed by the heat exchanger is generally uniform at any portion thereof, which in turn enhancing the performing of the heat exchanger. Since Bureau and Tanabe are both from the same field of endeavor and/or analogous art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Tanabe's teaching in Bureau's device so that the efficiency of the heat exchange performed by the heat exchanger is generally uniform at any portion thereof, which in turn, enhancing the performing of the heat exchanger.

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Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bureau, Jensen and/or Tanabe as applied to claims 2 and/or 6 above, and further in view of Memory et al. (US 6,964,296). Bureau, Jensen and/or Tanabe substantially disclose all of applicant's claimed invention as discussed above except for the material of tube being aluminum. Memory discloses (column 4, lines 4-29) that aluminum is known material to be use for heat exchanger's tubes for an obvious purpose of reducing the weight of the heat exchanger since aluminum has a high thermal conductivity and relative lightweight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Memory's teaching in the Bureau's device for a purpose of reducing the weight of the heat exchanger.

#### *Allowable Subject Matter*

Claims 5 and 14 are allowed.

Claim 27 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Longardner et al. (US 5,553,662) discloses a plumbed thermal energy storage system.

Fieback et al. (US 5,896,914) discloses a heater with hot thermal storage.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F (first Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keasel Eric can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tho v Duong  
Primary Examiner  
Art Unit 3753



TD  
August 2, 2006